REMARKS

Reconsideration and allowance are respectfully requested.

The applicant respectfully traverses the rejections to the claims for the following reasons.

The present invention relates specifically to a stator core of an electrical machine. The stator core comprises windings arranged in slots formed between stator teeth as well as a number of laminations of low loss stator iron and a lesser number of laminations of high thermal conductivity material. The laminations of high thermal conductivity material transfer and dissipate heat from the stator core (Page 5 lines 9-31). There are a number of different ways to use copper or aluminium or their alloys as high thermal conductivity lamination components. These different ways include incorporating copper, aluminium, or their alloys, in composite form using a resin or adhesive as a matrix (Page 10 lines 23 to Page 11 line 3), as an electrically insulating and thermally conducting material or as a composite carbon fibre material (Page 10 lines 28-32). More specifically, in the present invention, the high thermal conductivity components are coatings applied to the laminations of the low loss stator iron assembly (Page 7 lines 17-24) as claimed in amended claim 1.

JARCZYNSKI (EP0461906) discloses a stator core comprising core laminations 34 coaxially stacked with more highly thermal conductive laminations 36 which are interposed between preselected adjacent pairs of core laminations at selected axially spaced locations (Column 5 lines 48-53). The thermal collector 26 comprises copper or aluminium and the highly thermal conductive laminations 36 may be aluminium (Column 6 lines 33-49). As the Examiner acknowledges, JARCZYNSKI does not disclose

applying coatings to the laminations of the low loss stator iron assembly as claimed in claim 1.

SAWYER discloses an absorbent material between metal laminations, which is impregnated with a polybasic acid and polyhydric alcohol combined with fatty acids forming a thermosetting liquid which coats the stator and its windings. This liquid coating is infusible and forms a binder-insulator for the stator wherein the liquid is a high dielectric which becomes infusible to form electrical insulation. (Column 2 line 42 to Column 3 line 15). SAWYER does not disclose high thermal conductivity coatings applied to the laminations of the low loss stator iron assembly as claimed in claim 1. It is obvious from the above points that the coating of SAWYER is an insulator whereas in the present invention the coating is a conductor. Thus, SAWYER adds nothing to JARCYZNSKI.

Regarding the rejection of claims dependent upon claims 26 and 32, SAWYER does disclose electrically insulating layers between the laminations of the stator core, but does not disclose that the electrically insulating layers are high thermal conductivity laminations comprising electrically insulating and thermally conductive material. Furthermore, JARCZYNSKI does not disclose that the high thermal conductivity components are high thermal conductivity laminations comprising an electrically insulating and thermally conductive material. Specifically, neither JARCZYNSKI nor SAWYER discloses the electrically insulating layer comprises aluminium nitride or silicon carbide as claimed in claims 27 and 33.

Therefore, it would have not been obvious to one of ordinary skill to modify JARCZYNSKI in view of SAWYER to obtain the present invention as claimed.

New claims 38-42 have been added to further distinguish the present invention from the cited prior art and reference for these claims may be found on page 3 lines 19-25 of the present application.

Entry of this amendment is solicited, is believed appropriate, and is believed to distinguish the invention from the cited references. For the foregoing reasons, reconsideration and allowance are believed in order and are solicited.

Respectfully submitted,

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